

REMARKS

Responsive to the non-final Office Action mailed September 14, 2004, the Applicant respectfully submits the above amendments to the claims and specification and the following remarks. Reconsideration of the present Application is requested in light of these amendments and remarks. For the reasons set forth below, it is submitted that the present Application is in condition for allowance and such action is respectfully requested.

Specification Objection

Applicant has amended the specification to correct a typographical error caused by inverting the last two letters of U.S. Patent No. 4,608,280 in paragraph 0006 from the background of the specification. This error would have been readily apparent to a person of skill in the art and the correction does not constitute new matter.

Section 103 Rejections

Claims 1-30 of the present application stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Holbert* in view of *Murray*. In what is a clear hindsight reconstruction of the present invention, the Office Action combines two references that together provide no suggestion of such a combination and that do not teach all of the elements of the claims.

As taught in the present Application in paragraph 0007, *Holbert* disclosed a joint in-fill system using the heavy aromatic hydrocarbons. Applicant's invention is an improvement over the joint in-fill system of *Holbert*. Applicant has discovered a way of eliminating the aromatic hydrocarbons required by *Holbert* and thereby eliminate the disadvantages including air and marine environmental and safety issues associated with the aromatic hydrocarbons. The Office Action acknowledges that *Holbert* does not teach or disclose ester compounds or their amounts as claimed by applicant.

1. Holbert Teaches Away from the Murray Combination

The Office Action attempts to overcome the deficiency of *Holbert* citing *Murray*. *Murray* discloses a polyurethane adhesive which initially foams, and then collapses into a void-filling membrane. The *Murray* adhesive is taught to be used as a construction adhesive in the insulation of ceramic tile, asphalt shingles, roof insulation board, and wood flooring. The combination of *Murray* with *Holbert* is inappropriate. Other than the two

patents being generally in the area of polyurethane chemistry, there is absolutely no teaching or suggestion within either *Holbert* or *Murray* that the two should be combined. In fact, *Holbert* teaches away from the combination that the Office Action makes. *Holbert* teaches the use of liquid organic carbonates as plasticizers because “in the composition of this invention they reduce the propensity of the composition to shrink as it cures, and therefore reduce the tendency of the product to crack under stress produced during curing.” *Holbert*, column 6, lines 59-67. *Holbert* then goes on to teach away from other plasticizers saying, “other plasticizers which have been tried do not produce this advantageous result.” *Holbert*, column 7, lines 1-2. Despite this warning, the Office Action, using clear hindsight, makes the replacement of the ester components shown in *Murray* with the organic carbonate of *Holbert*. There is certainly no suggestion in either *Murray* or *Holbert* to replace any other component of *Holbert* with an ester diluent. The “emulsifiers” of *Murray* are not selected to reduce the propensity for the composition to shrink as it cures, because *Murray* is a collapsing foam—which by necessity shrinks as it cures. Nothing else in *Murray* suggests that esters can be used to achieve the advantages of liquid organic carbonates in *Holbert*’s inventions. In sum, there is no teaching or suggestion to combine *Murray* with *Holbert*, and in fact, *Holbert* teaches away from such a combination. Therefore, the rejection of claims 1-30 as being obvious in view over the combination of *Holbert* and *Murray* is improper and should be withdrawn.

Further, the combination is particularly egregious in respect to several particular claims. Independent claim 1 (and dependent claims 2-11, 23-25) are directed to forming a stable foam. The person of ordinary skill in the art would not look to *Murray* which discloses only the formation of a “void-filling membrane” after the collapse of cell structures from an intermediate foam. If anything, a person of ordinary skill in the art would want to stay away from the teachings of *Murray* to avoid collapse of his foam.

2. The Patentable Distinction of Applicant’s Recipe Cannot Be Ignored

Regarding claim 1 and the claims depending therefrom, the Office Action completely discounts the importance of Applicant’s claimed recipe of components. Applicant’s claim 1 requires 15-25 weight percent TXIB in the A side component and 50-65 weight percent TXIB in the B side component. It is undisputed that neither *Murray* or *Holbert* teach such limitations.

The Office Action states, “with respect to the amount of additive, Murray is not limited to amounts of plasticizers/emulsifying material beyond suggestions of preferable quantities, and it has been held that it is obvious to vary a result effective variable with the expectation of success.” As an initial matter, Applicant requests citation in either *Holbert* or *Murray* that the ester component is a “result effective variable” and a statement of what result is expected. See MPEP 2144.05.

Further, the preferred range of emulsifier disclosed for the B side component in *Murray* is 1% to 5%. There is no indication anywhere in *Murray* that more of this component can be used. Applicant’s claim 1 is for the TXIB in the B side of 50% to 65%. Apparently, the Office Action finds that it would be obvious to increase the amount of TXIB **at least 10 fold** when combining *Murray* with *Holbert*. There is absolutely no justification for this. This goes well beyond minor adjustments to the formulation. *Haynes Int’l. v. Jessop Steel Co.*, 8 F.3d 1573, 1577, n.3 (Fed. Cir. 1993) ([R]ejection is properly established when the difference in range or value is **minor**.”) (emphasis added). There is nothing cited to suggest such a drastic change would have an “expectation of success.” There are no overlapping ranges disclosed. It is beyond the pale to argue that it would be obvious to increase the small amount of emulsifier additive used in the *Murray* disclosure, to an amount which includes at least half of the B side component.

The Office Action inherently acknowledges that *Murray* does not teach the use of any ester component in the A side of a reaction mixture. Including both the A and B side in the comparison, as the Office Action does, it becomes even more ludicrous. Assuming a 50/50 mixture of A and B side from *Murray*, the preferred range emulsifier would be 0.5 to 2.5 grams out of 100 grams. A similar 50/50 mixture of Applicant’s claimed invention (see Applicant’s ¶ 0026) would result in a total composition having between 32.5 grams and 44 grams of TXIB. That’s an increase of 13 to 17 times the amount of TXIB. Persons of ordinary skill in the art would not see that as an obvious modification.

Additionally, the liquid organic carbonate of *Holbert*, which the Office Action substitutes *Murray* for, is shown only to be used as 5% of the B side components (see examples 1 and 2 of *Holbert*). This is in keeping with the *Murray* teachings, not Applicant’s claim.

3. Applicant's Dependent Claims have been Ignored.

Dependent claims 7-8 and 23-24 are particularly directed to producing a polyurethane foam having an open cell content of about 80%, or 90%, respectively, or higher. There is no teaching or suggestion in either *Holbert* or *Murray* of a composition that could have such an open cell content. Additionally, there is no teaching or suggestion in either *Holbert* or *Murray* of a polyurethane foam having a density of between 2 and 12 pounds per cubic feet the limitations of claim 9. In fact, *Holbert* teaches that with foaming the density of the material may be reduced to one-third of its unfoamed density of about 66 pounds per cubic foot. That is a low of 22 pounds per cubic foot. Much higher than the low density foams disclosed and claimed in Applicant's present claims. Applicant suggests the Office Action failed to consider these claims.

Enablement Rejection

The Office Action has rejected claims 13-29 saying that these fail the enablement requirement of 35 U.S.C. § 112, first paragraph. Particularly, the Office Action states that "the claims indicate the selection of "ester diluent" but selection of members from the broad group of "esters" was not described in the specification in such a way as to enable one's skill in the art to which it pertains . . . to make and/or use the invention." Applicants respectfully disagree.

It is beyond question that persons of ordinary skill in the art would know what a "ester diluent" constitutes and how to select a material that is an ester. The Application teaches preferred composition ranges of ester diluents (See, for example, ¶ 0016), and the Application teaches the other components that can be used in the composition. This is all the information that is required to enable to claim 13. It is the PTO's burden to give a reasonable basis to question enablement when faced by such. See MPEP § 2164.04. The Office Action must explain why, given the recipes, preferred ranges, etc., the Application would not allow a person skilled in the art to make and use the invention without undue experimentation and provide objective evidence of such. No such explanation is given in the Office Action.

Applicant does teach additional information regarding preferred esters. The Application states that the preferred ester is a diester and gives a preferred specific

example of TXIB. Additionally, the present Application incorporates U.S. Patent No. 6,521,673 by reference. The '673 patent further describes additional characteristics of preferred ester diluents as including being substantially water insoluble and substantially nonreactive with polyisocyanate. Given this host of information, there is no basis for the Office Action to conclude that a person of ordinary skill in the art could not make and use the invention of claim 13 without undue experimentation.

This rejection is particularly improper for dependent claims 16 and 17 which further limit the ester diluent. Claim 17 is the TXIB given specifically in the examples and is clearly enabled.

Double Patenting Rejections

The Office Action includes a obviousness type double patenting rejection over claims 1-13 of U.S. Patent No. 6,521,673, and provisional obviousness type double patenting rejections over pending application Nos. 10/801,158 and 10/326,338.

Although Applicant believes it is unnecessary and the double patenting rejection is improper, Applicant includes a terminal disclaimer to overcome the provisional obviousness type double patenting rejection over co-pending applicant No. 10/801,158. These applications were filed on the same date and, therefore, there is no term difference incurred by filing a terminal disclaimer.

Regarding the double patenting rejections over U.S. Patent 6,521,673 and the provisional rejection of patent application 10/326,338, Applicant respectfully disagrees and suggests these rejections are not proper. Double patenting rejection must rely on a comparison of the claims in the issued or to be issued patent with the claims of the pending application. The '673 claims are directed to a composition for preparing a rigid foam ('673 claim 1) and a method of preparing a rigid foam (claim 11). The '338 Application is similar. The pending claims in the present Application are directed to a method for filling a gap at the junction between two links of coated pipe. These claims involve steps such as enclosing the gap with a mold having an opening, etc. Even if Applicant believed that the composition used in the pending method claims was the same as what is disclosed in the '673 patent (which Applicant does not), Applicant's claims are patentably distinct. It has long been held, based on statutory authority, that a patent may be granted on a process

which is a new use of a known process or composition of matter. The '673 patent claims disclose nothing in regard to a method of use as a joint in fill. To make this double patenting rejections over the '673 claims, one must assume that all new uses of the composition are obvious which is contrary to law.

The obviousness type double patenting rejection based on the '673 patent is improper, as is the provisional rejection over the pending '338 application. These references disclose nothing of a joint fill method such as claimed in Applicant's pending claims. Applicant respectfully requests that these rejections be withdrawn.

CONCLUSION

For the foregoing reasons, it is respectfully submitted that the claims are allowable and such allowance is respectfully requested. Applicant's comments towards the independent claims are intended to address any rejections of any dependent claims not specifically mentioned. Applicant has addressed all claims standing under rejection. If the Examiner has any questions or wishes to discuss the claims, Applicants encourage the Examiner to call the undersigned at the telephone number indicated below.

Respectfully submitted,



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